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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,691	11/24/2003	Ronald S. Indeck	53047/44791	8307

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EXAMINER	
FLEURANTIN, JEAN B	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/722,691	INDECK ET AL.	
	Examiner	Art Unit	
	JEAN B. FLEURANTIN	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-19,33-36,40,41 and 53-118* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *87-90 and 112-118* is/are allowed.

6)☒ Claim(s) *9-19,33-36,40,41,53-61,64-81 and 91* is/are rejected.

7)☒ Claim(s) *62,63 and 112-118* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/28/5*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/28/05 has been entered.

a. Claims 87-118 have been added.

b. Claims 9-19, 33-36, 40, 41 and 53-118 remain pending for examination. The Examiner discusses the limitations of newly added claims 87-118 as indicated in sections 4 and 5.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/28/05. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Applicant' Remarks

3. Applicant's arguments, filed 10/28/05, pages 17 and 20-21, paragraphs 2 and 3-4, with respect to claims 9-19, 33-36, 40, 41, 53-61, 64-86, 91-111 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-19, 33-36, 40, 41, 53-61, 64-86, 91-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over "String Matching on Multicontext FPGAs using Self-Reconfiguration - 1999" issued to Sidhu et al., ("Sidhu") In view of U.S. Patent No. 4,081,607 issued to Vitols et al., ("Vitols").

As per claim 9, Sidhu discloses "a retrieval device for retrieving data from a mass storage medium" (i.e., memory access; page 223, col. 1, paragraph 1) including "said determined key being an analog signal representative of the data itself and the data signal also being an analog signal" (see page 221, col. 1, paragraph 5.1.1). Sidhu fails to explicitly disclose a matching circuit for comparing a determined key representative of the data sought to be retrieved with a data signal representative of a continuous stream of data read from said mass storage medium. However, Vitols discloses a matching circuit for comparing a determined key representative of the data sought to be retrieved with a data signal representative of a continuous stream of data read from said mass storage medium (see Vitols col. 2, lines 25-40).

It would have been obvious to a person of ordinary in the art at time the invention was made to modify the teachings of Sidhu with matching circuit for comparing a determined key representative of the data sought to be retrieved with a data signal representative of a continuous stream of data read from said mass storage medium as disclosed by Vitols (see Vitols Figs. 1 and 5 and corresponding paragraphs).

Such a modification would allow the teachings of Sidhu to provide a system for asynchronously detecting one or more keywords in continuous speech wherein the input speech is changed into a plurality of analog speech parameters by a speech processor, wherein sequences of the digitized spectral

parameters are continuously correlated in an asynchronous correlation circuit with subelements of one or more desired keywords in order to develop correlation data, and the correlation data selectively enables a decision function circuit to develop a preselected decision output signal for each preselected keyword that is detected (see Vitols col. 29, lines 39-52), thereby improving the reliability of the associative database scanning and retrieval information.

As per claims 10, 13 and 35, Sidhu further discloses "a memory connected to said retrieval device for storing said retrieved data for access by another processor" (see page 223, col. 1, paragraph 1).

As per claims 11, 36 and 81, SIdhu discloses "said retrieval device is directly coupled to said mass storage medium and interfacing said mass storage medium with a processor desiring said retrieved data for processing thereof" (see Fig. 2).

As per claims 12 and 18, in addition to claim 9, Sidhu further discloses "said retrieval device being directly coupled to said mass storage medium" (see Fig. 1).

As per claims 14 and 16, Sidhu discloses "said matching circuit is configured to match a digital key with a digital data signal" (see page 221, cols. 1-2, paragraph 5.2.1).

As per claims 15 and 17, Sidhu further discloses "a plurality of mass storage media coupled to said matching circuit" (see Fig. 1b).

As per claim 33, the limitations of claim 33 are rejected in the analysis of claim 9, and this claim is rejected on that basis.

As per claims 34 and 91, Sidhu discloses "a retrieval device for retrieving data from a mass storage medium" (i.e., memory access; page 223, col. 1, paragraph 1) including "said determined key being an analog signal representation of the data itself and the data signal also being digital" (see page 221, col. 1, paragraph 5.1.1). Sidhu fails to explicitly disclose a matching circuit for frameless comparing and correlating a determined key representative of the data sought to be retrieved with a data signal representative of a continuous stream of data read from said mass storage medium. However, Vitols discloses a matching circuit for frameless comparing and correlating a determined key representative of the data sought to be retrieved with a data signal representative of a continuous stream of data read from said mass storage medium; see Vitols col. 2, lines 25-40).

It would have been obvious to a person of ordinary in the art at time the invention was made to modify the teachings of Sidhu with matching circuit for comparing a determined key representative of the data sought to be retrieved with a data signal representative of a continuous stream of data read from said mass storage medium as disclosed by Vitols (see Vitols Figs. 1 and 5 and corresponding paragraphs).

Such a modification would allow the teachings of Sidhu to provide a system for asynchronously detecting one or more keywords in continuous speech wherein the input speech is changed into a plurality of analog speech parameters by a speech processor, wherein sequences of the digitized spectral parameters are continuously correlated in an asynchronous correlation circuit with subelements of one or more desired keywords in order to develop correlation data, and the correlation data selectively enables a decision function circuit to develop a preselected decision output signal for each preselected keyword that is detected (see Vitols col. 29, lines 39-52), thereby improving the reliability of the associative database scanning and retrieval information.

As per claims 40, 41 79 and 80, Sidhu discloses "said matching circuit is configured to approximately match a digital key with a digital data signal" (see page 221, cols. 1-2, paragraph 5.2.1).

As per claim 53 and 77, Sidhu discloses "a data retrieval system comprising: a mass storage medium in which data stored" (i.e., memory access; page 223, col. 1, paragraph 1); and "a retrieval device in communication with the mass storage medium" (see page 221, paragraph 5.2), "said determined key being an analog signal representative of the data itself and the data signal also being an analog signal" (see page 221, col. 1, paragraph 5.1.1). Sidhu fails to explicitly disclose wherein the retrieval device is configured to receive a continuous stream of data from a mass storage, and continuously process the data stream to determine whether an approximate match exists. However, Vitols discloses wherein the retrieval device is configured to receive a continuous stream of data from a mass storage, and continuously process the data stream to determine whether an approximate match exists (see Vitols col. 2, lines 25-40).

It would have been obvious to a person of ordinary in the art at time the invention was made to modify the teachings of Sidhu with wherein the retrieval device is configured to receive a continuous stream of data from a mass storage, and continuously process the data stream to determine whether an approximate match exists as disclosed by Vitols (see Vitols Figs. 1 and 5).

Such a modification would allow the teachings of Sidhu to provide a system for asynchronously detecting one or more keywords in continuous speech wherein the input speech is changed into a plurality of analog speech parameters by a speech processor, wherein sequences of the digitized spectral parameters are continuously correlated in an asynchronous correlation circuit with subelements of one or more desired keywords in order to develop correlation data, and the correlation data selectively enables a decision function circuit to develop a preselected decision output signal for each preselected keyword that is detected (see Vitols col. 29, lines 39-52), thereby improving the reliability of the associative database scanning and retrieval information.

As per claims 54, 55, 56 and 78, Sidhu further discloses "a system bus in communication (see Sidhu's Fig. 4) with the retrieval, wherein the system bus is configured to provide a search request to the retrieval device, and wherein the retrieval device is further configured to process the search request to determine the key" (see page 221, col. 1, paragraph 5.1.1).

As per claim 57, Sidhu further discloses "a processor in communication with the system bus, wherein the processor is configured to place a search request on the system bus for receipt by the retrieval device" (see page 221, paragraph 5.2).

As per claims 58 and 73, the limitations of claims 58 and 73 are rejected in the analysis of claim 9, and these claims are rejected on that basis.

As per claim 59, the limitations of claim 59 are rejected in the analysis of claim 34, and this claim is rejected on that basis.

As per claims 60, 64 and 65, the limitations of claims 60, 64 and 65 are rejected in the analysis of claim 9, and these claims are rejected on that basis.

As per claims 61, 66 and 72, Sidhu further discloses "wherein the retrieval device is further configured to perform the pattern comparison by calculating a correlation coefficient that is indicative of a degree of correlation between the key and the data stream" (see page 220, col. 2, paragraph 5.2).

As per claim 67, the limitations of claim 67 are rejected in the analysis of claim 9, and this claim is rejected on that basis.

As per claim 68, Sidhu discloses "a retrieval device is further configured to determine whether an approximate match exists between the key the data stream via frameless matching" (see page 221, paragraph 5.2).

As per claim 69, Sidhu discloses "the search request is representative of a user-specified query" (i.e., accessing by the multicontext FPGA; see page 221, paragraph 5.1.1).

As per claim 70, Sidhu discloses "the retrieval device is further configured to determined a starting location in the mass storage medium that represents the location at which the data stream is to begin" (see Figs. 1a and 1b).

As per claim 71, Sidhu discloses "the retrieval device is further configured to determined an ending location in the mass storage medium that represents the location at which the data stream is to determinate" (see page 221, col. 1, paragraph 5.1.1).

As per claims 74-76, the limitations of claims 74-76 are rejected in the analysis of claim 34, and these claims are rejected on that basis.

As per claims 82-86, Sidhu further discloses "said retrieval device performs the comparison via frameless matching" (see page 219, col. 2, paragraph 4).

Allowable Subject Matter

5. Claims 62, 63 and 92-111 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

c. Claims 87-90 and 112-118 are allowed over the prior art of record.

CONTACT INFORMATION

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571 - 272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571 - 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bolte Fleurantin

Patent Examiner

Technology Center 2100

January 07, 2006

SHAHID ALAM
PRIMARY EXAMINER